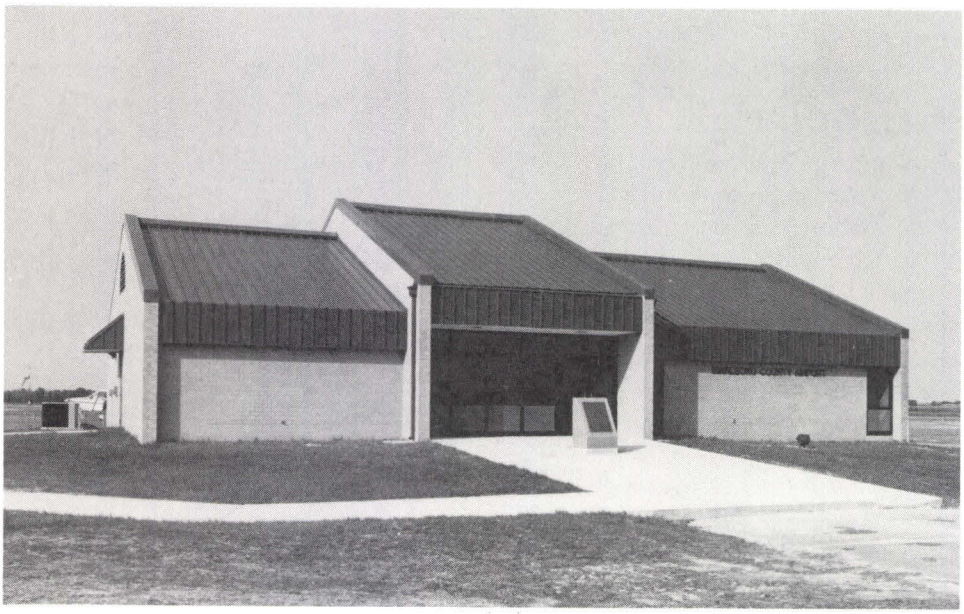
Palmetto AVIATION

VOLUME 35, NUMBER 1 Published by the South Carolina Aeronautics Commission JANUARY, 1983



Bennettsville Terminal

The recently completed Bennettsville Terminal building will provide an attractive, modern place for pilots and passengers to meet or wait on flights. The 3,500 square foot building contains an airport office, lounge and lobby, restrooms and a multi-purpose room which can be used as a classroom. The $200,000 project was funded with county funds and a matching grant from the South Carolina Aeronautics Commission. (SCAC photo)

Aeronautics pilot helps rescue crash victim

South Carolina Aeronautics Commission pilot William D. Robinson and two other men helped pull an injured man away from the burning wreckage of his Piper Lance after it hit the trees and crashed on take off at Hilton Head Airport Dec. 4.

Robinson, SLED agent Harold Hill and Island Realtor Stewart Dunbar were waiting on the airport ramp when David B. Smith began his takeoff about 8 p.m.

The men said the take off appeared normal, but Smith hit the trees at the end of Runway 3, cut a swath through the woods and triggered several small fires.

The men raced to the site in Hill's car. Robinson said he found Smith on the ground, obviously dazed but conscious and trying to talk. Robinson said the pilot had apparently been thrown out of the fuselage by the impact which ripped off the wings and the top of the airplane. There was fire around the pilot's feet and airplane.

Robinson and the other two men moved Smith away from the flames just before the entire aircraft became engulfed in flame.

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Dexter Martin, S.C. aviation pioneer, dies

Dexter C. Martin, the first director of the South Carolina Aeronautics Commission and a pioneer aviation leader in the state and nation, died in Columbia Dec. 12, 1982. He was 85 years old.

Martin was born in Orange County California in 1897 and started flying in 1919. His first pilot licenses were signed by Orville Wright. When he began flying, he said, he used railroad tracks and rivers to navigate and, if you didn't know where you were, you stopped and asked.

In 1927, Martin came to the East Coast to do some barnstorming and soon set up an airport and FBO in South Carolina.

In 1935, Martin established and became director of the South Carolina Aeronautics Commission. Through his vision, new airports appeared wherever local funds were available for matching federal funds in the Federal Airport Program.

Many of the new airports were rushed to completion for use during the national emergency in 1941. And under Martin's leadership, South Carolina was the first state in the nation to enact an organized flight instruction program.

In 1941, Martin was appointed the first Civil Air Patrol wing commander for the state. He organized squadrons throughout the state to aid in the war effort. He obtained aircraft, radio and transportation for search and rescue

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PALMETTO AVIATION is an official publication of the South Carolina Aeronautics Commission. It is designed to inform members of the aviation community, and others interested in aviation, of local developments in aviation and aviation facilities and to keep readers abreast of national and international trends in aviation.

The Aeronautics Commission is a state agency created in 1935 by the S.C. General Assembly to foster and promote air commerce within the state.

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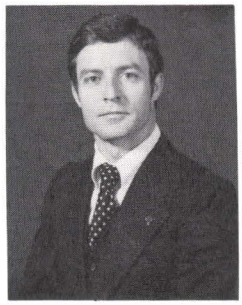
FBO risk exposure varies with services perfomed



By Henry M. Burnwell

Henry M. Burwell is a practicing attorney in Greenville, specializing in aviation, antitrust and international trade law.

Fixed Based Operators (FBOs) render unique and highly skilled aviation services to the public. As a result, FBO liability to the public varies with the risk and legal exposure inherent in the aviation activity performed. Historically, comprehensive insurance programs and more complex written agreements have arisen as common costs of business for FBOs.

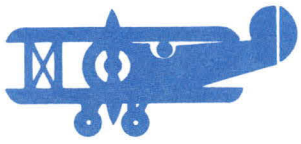
Most FBOs render three primary areas of service which include aircraft maintenance, ground services and aircraft operation. Some FBOs have additional responsibilities of facilities management as a result of airport management duties franchised by local municipal authorities. Each one of these areas has unique risk characteristics which arise from statutory provisions or common law developed by the courts. Various theories of liability include statutory or common law negligence, breach of contract, breach of warranty and absolute liability.

Aircraft maintenance must be performed according to the Federal Aviation Regulations (FARs) and to a level of airworthiness which is also required by common law standards of reasonable care. The use of work orders, limited warranties, releases, indemnities and similar mechanisms have been developed to allocate risk between the owner, operator and service company.

Ground services such as fueling or aircraft turn-arounds must also be performed according to federal and state statutes. However, because of the hazardous nature of fuels and the possibility of handling hazardous materials cargo, different liability exposure results. Reallocating such risks are sometimes prohibited by federal regulation. Consequently, different contractual considerations are necessary.

Aircraft operation by lease or charter activity is regulated by federal and state law. Because of language contained in the Federal Aviation Act of 1958. Section 101 (31) and varying court decisions throughout the United States, there is some risk for an FBO dry-leasing aircraft on its own account or for an owner. In some situations an FBO can be held responsible for the negligence of a non-employee pilot of that aircraft. Such liability could arise from Section 101 or by application of common law of negligent entrustment.

The best protection available for liability exposure is good insurance coverage and knowledgeable risk management. Effective risk allocation results from effective documentation. ✈



Crash victim

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The aircraft was fully involved when Hilton Head Firefighters arrived a few minutes later. Hilton Head Fire Chief Joe Best credited and praised the men's quick action.

"Somebody pulled that pilot out and definitely saved his life," Best said.

Smith sustained fractured ribs and head lacerations in the accident. ✈

Dexter Martin

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to relieve the military and he established and implemented Coastal Base no. 8 near Charleston.

During World War II, Doolittle's Raiders, a mission under the Defense Landing Program, was located in Columbia. Under Martin's direction, Lexington County Airport, now the Columbia Metropolitan Airport was developed to meet their needs. It was the first airport developed in South Carolina.

He set up the Palmetto School of Aeronautics in Columbia to train mechanics.

As an additional contribution to the war effort, the South Carolina Aeronautics Commission and its personnel, operating under the direction of Martin, assisted in the site selection and subsequent development of airports for military purposes.

As part of the program, 17 military bases became operational. These included the well-known Shaw, McEntire and Myrtle Beach Air Force bases and a Naval Air Station.

He was instrumental in beginning civilian pilot training program in 1939 at Owens Field, with Hawthorne Flying Service providing the flight training and the University of South Carolina the ground training. It was estimated that the program turned out about 1,000 private pilots.

Mr. Martin flew with the famed Mabel Cody's Flying Circus which toured North and South Carolina in 1928 and 1929.

From 1935 to 1950, Mr. Martin was a member of the National Association of State Aviation Officials and chaired the Committee on Flight training. In 1940-41 he was chairman of the Committee on Uniform State Aviation Laws, which successfully untangled a lot of interstate conflict and red tape then hindering the national development of aviation. In 1945, Martin was chairman of the Surplus Airport and Property Act Committee. He was also a member of the Air Space Committee.

After his retirement, he spent much of his time in his office, recording the history he lived. Much of the history has been put into the University of South Carolina's Caroliniana Library. ✈

Frank Kelley

FAA Accident Prevention Specialist

Frank Kelley retires after nearly 40 years in aviation

Frank Kelley, Accident Prevention Specialist with the Columbia Flight Standards District Office (FSDO), retired Dec. 31, after nearly 40 years in aviation.

Kelley has been with the Columbia FSDO for 14 years and has been accident prevention specialist since 1970. At one time or another, most safety concsious pilots in the state have probably attended a safety meeting hosted by Kelley.

Kelley's flying career began in the Army Air Corps as an Aviation Cadet in March of 1943. He earned his wings in December, 1943 and was an instructor in the BT-13 during 1944. He then served as a flight engineer on the B-29 until October, 1945.

From 1945 through 1955, Kelley was a flight instructor teaching Air Force pilots, in the T-6, T-34, T-28 and T-37 aircraft.

After that, he spent eight years as an air traffic controller with the Jacksonville ARTCC before moving to the Columbia GADO. ✈

Exemption sought for ultralight training flights

The AOPA Air Safety Foundation has petitioned the Federal Aviation Administration (FAA) for an exemption from federal aviation regulations to permit two-place ultralight aircraft to be used for flight instruction.

Currently, ultralights with two seats must be certificated as "experimental" aircraft and cannot be used for hire, including dual instruction for pay.

The use of two-place ultralights for training, according to the Foundation, is increasing in many parts of the world, especially in France, West Germany, the UK and Canada. ✈

Breakfast Club

The South Carolina Breakfast Club will meet at the following locations in January, February and March:

Jan. 16	**Charleston Executive Airport, John's Island**
Jan. 30	**Daniel Field, Augusta, Ga.**
Feb. 13	**Clarendon County Airport, Manning**
Feb. 27	**J.E. Locklair Airport, Summerville**
Mar. 13	**Woodward Field, Camden**
Mar. 27	**Dillon County Airport, Dillon**

Marking Loris

South Carolina Aeronautics Commission maintenance personnel paint runway markings at Twin City Airport near Loris. The runway was recently extended from 3,000 to 3,695 feet. (Aeronautics Commission photo).

Study shows older pilots have fewer accidents

A former Civil Air Surgeon has done a study which shows that pilots generally have fewer aircraft accidents as they grow older.

An article, written by former Deputy Civil Air Surgeon Stanley R. Mohler, currently of Wright State University at Dayton, notes " . . . a pilot can fly at any age, and there are . . . safe pilots in all age groups."

Mohler, however, cites National Transportation Safety Board statistics (see table) to show peak accident predictability in the age 30-34 group, declining at ages 35 through 39, with marked reduction for pilots ages 40 through 44. Accidents continue to decline dramatically after that age bracket through ages 60 and beyond.

Mohler contends along with other authorities that increasing age and experience enhance judgement, thus contributing to safer flying and fewer accidents.

Mohler contends further that it has never been found justified to place an upper age limit on general aviation pilots, more than 10,000 of whom are 65 and older.

Mohler discounts hours-flown as a causal factor in any of the NTSB age data linked to accidents.

He writes:

". . . there are pilots who fly several hours a day for hundreds of hours a year, and do so with care and judgement. These pilots are not at high risk. There are some who fly rarely but make each of these flights a hazardous adventure.

"How a pilot flies, therefore, is far more important than the mere number of hours in the air (exposure). 'Exposure' as a factor in flight safety has significance only in regard to what the exposure is to: for example, repeated unwarranted low-level maneuvers, the center of thunderstorms, and other hazardous flight activities."

Pilot Age and Accidents

Age	Active Pilots 1978	No. Accidents Expected 1978	No. Accidents Observed 1978	Accidents Per 1000 1978	Active Pilots 1979	No. Accidents Expected 1979	No. Accidents Observed 1979	Accidents Per 1000 1979
16-19	374	3	8	21.4	468	4	7	15.0
20-24	10,839	92	167	15.4	11,839	90	160	13.5
25-29	26,102	220	312	12.0	25,755	196	294	11.4
30-34	45,011	379	414	9.2	44,606	341	359	8.0
35-39	41,742	352	321	7.7	42,520	324	309	7.3
40-44	35,270	297	236	6.7	35,031	267	209	6.0
45-49	28,012	236	214	7.6	29,585	225	191	6.5
50-54	19,660	166	164	8.3	18,803	143	149	8.0
55-59	22,499	190	131	5.8	23,073	176	123	5.3
60+	12,205	103	71	5.8	14,069	107	72	5.1
	241,714	2,038	2,038		245,749	1,873	1,873	

Source: NTSB and FAA Statistical Handbook, Calendar Years 1978-79. Pilots-in-Command having Commercial and Air Transport Certificates, General Aviation Accidents.

Air crashes take lives of fifteen during 1982

Fifteen persons were killed in air crashes in South Carolina during 1982 as the state recorded the highest number of accidents since 1978.

At least 43 accidents occurred in the state last year. Over half of the accidents and all but two of the fatalities occurred in single engine aircraft.

There were 27 single engine aircraft involved in accidents; nine twins, four helicopters, two hot air balloons and one glider.

Statistics show about half of the pilots involved in the accidents held commercial or ATP certificates. Only three student pilots were involved in crashes and none were fatalities.

One of the helicopter accidents was caused when the pilot — spraying a field — lost control because of a wasp in the cockpit. Another ag pilot attempted to take off his helicopter with a chain still secured to a trailer.

Both the balloon accidents apparently involved gusty wind conditions. Three persons were killed in a balloon Oct. 3 when it ran out of fuel & descended into high power lines three miles north of Piedmont, S.C.

Other fatalities were:

Jan. 29 — One man was killed when his Cessna 150 crashed three miles northwest of Darlington.

An autopsy revealed alcohol in his blood.

About a month later, four persons were killed when their PA32-260 broke up in flight after apparently encountering severe weather about 5 miles west of Greenwood.

On May 20, two persons on a cross country flight from Newbern, N.C. were killed when their Cessna 210 crashed in mountains 11 miles north of Westminister.

On July 13, a Charleston radio announcer beginning his morning traffic watch, died after his Cessna 172 crashed on take off from John's Island Airport.

On Aug. 19, one man was killed when his OSA-1 Smith Mini Plane crashed as he was practicing aerobatics. Investigators are still trying to determine the cause.

On Oct. 20, one man was killed in a crash one and a half miles west of Falcon Airport.

And on Nov. 20, two men were killed when a Cessna 414 crashed while on an instrument approach to Aiken Airport. ✈

FAA eliminates most RNAV routes

Effective the 23rd of this month, the FAA will officially change the Airman's Information Manual (AIM) to abolish almost all published RNAV routes. (The exception will be in Alaska, where a few published high-altitude RNAV routes have been retained.) The new rule reflects an unofficial practice that had been in effect since January 21, 1982 which had allowed random point-to-point RNAV flights provided that they could be made under radar surveillance.

The FAA made the change because pilots can fly more directly using random routes and usually request them instead of the published routes. ✈

Toe brakes, parking brakes don't stop Aztec

A recent accident occured immediately after a pilot started the engines on a Piper Aztec. According to the pilot, he had set the parking brakes, but when he discovered that the aircraft was moving, he grabbed the parking brank handle and applied toe brakes. The aircraft continued moving and he taxied into another aircraft causing considerable damage to both aircraft.

The braking system on PA-23 series aircraft is such that the parking brake handle must be forward or "off" in order for the toe brakes to be effective. ✈

Cadet Barber, left, and Air Force Col. "Tony" Myers, flight captain for the Palmetto Flight

Palmetto Flight honors CAP cadet Barber

The Palmetto Flight, Order of Daedalians, at Shaw AFB, honored Cadet Lt. George A. Barber as their outstanding Civil Air Patrol cadet.

Barber, a member of the Sumter Composite Squadron, was cited for his leadership role in the CAP cadet programs.

He is currently chairman of the Cadet Advisory Council and he has held positions as cadet commander of the Charleston Composite Unit and of joint summer encampments. He was also the prime motivator of a leadership school conducted at Shaw AFB for cadets throughout the state.

Cadet Barber is a freshman at the University of South Carolina. His family lives in Charleston.

The Order of Daedalians is a national fraternity of military pilots. ✈

150 pilots: check that bottom fuel drain!

The Columbia Flight Standards District Office (FSDO) has issued a reminder to Cessna 150 pilots to remember to check the fuel drain on the bottom of the airplane.

In addition to the wing drains, main fuel strainer and carburetor, the 150 has one other important fuel drain which apparently has been overlooked by both mechanics and pilots.

This drain is a tube that extends from a T fitting through the bottom of the fuselage where it is capped. Contrary to popular opinion, this T is not completely flushed of water by draining the fuel strainer.

In cold weather, the water left in the drain can form an ice plug and may expand upward restricting the fuel flow.

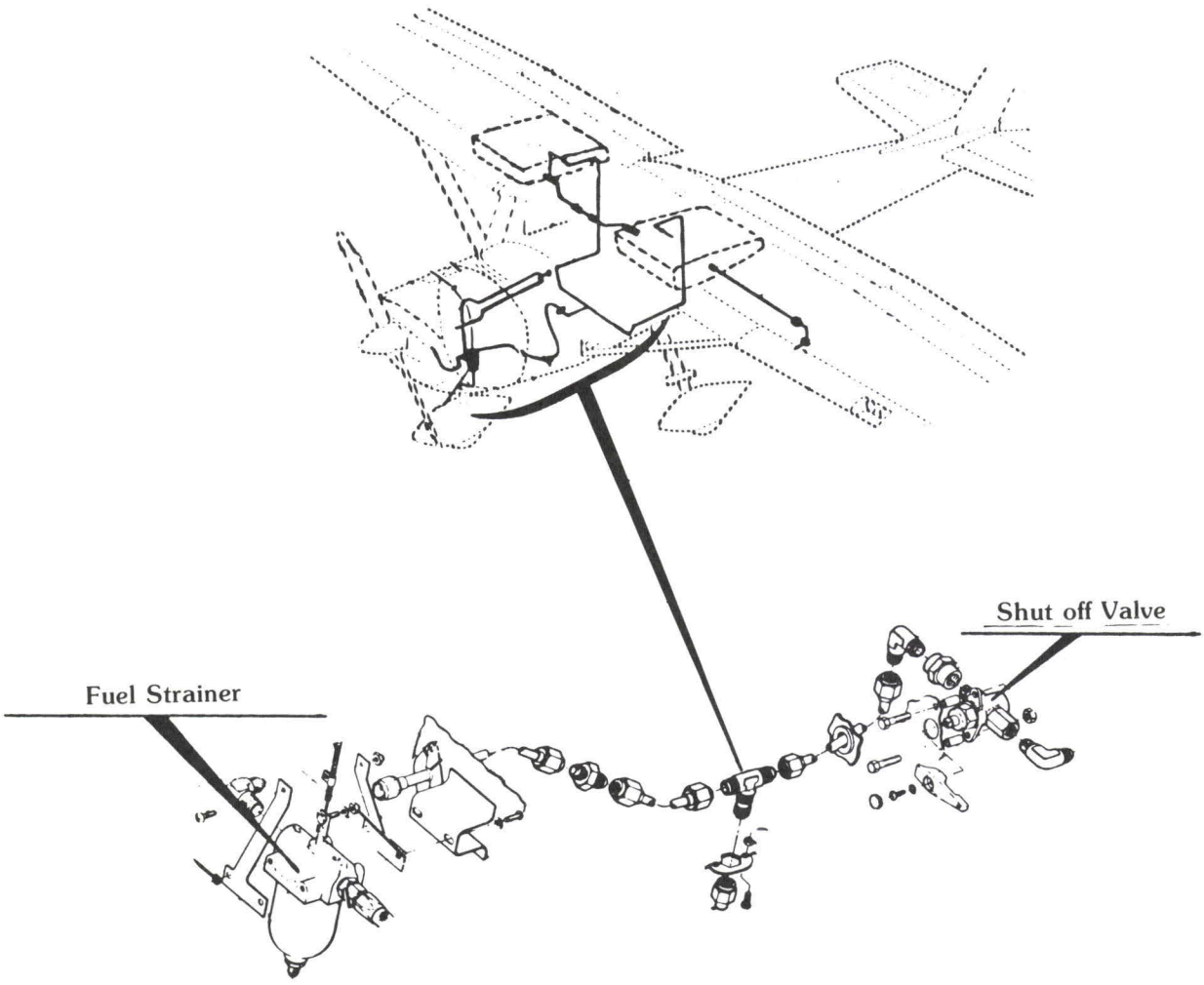
Two years ago, an ice plug in the T drain caused the crash of a 150 at Spartanburg Downtown Airport, injuring a student and an instructor. The FAA maintenance analysis center at Oklahoma City, has identified at least 10 accidents in recent years attributable to ice in the T fitting.

The drain is hard to see unless you get down on your hands and knees and look underneath the fuselage and it requires a wrench to remove the plug to drain it. However, the drain can be converted to a quick type drain by an A&P mechanic.

So, with cold weather coming on, you 150 drivers remember that drain. Take a few extra minutes to drain that T before any flight in cold weather. ✈

Department of Transportation FAA Southern Region

CESSNA MODEL 150 - FUEL LINE DRAIN TEE



Cross country changes provide more flexibility

Cross-country regulations for private and commercial pilot applicants were amended effective 11-15-82. These amendments reduce the burden on pilots obtaining required cross-country experience by providing more flexibility in the section of landing points and will allow savings of fuel costs to trainees.

The revised rules are as follows:

61.109 AIRPLANE RATING: AERONAUTICAL EXPERIENCE (Private Pilot)

(b) (2) - Ten hours of cross-country flights, each flight with a landing at a point more than 50 nautical miles from the original departure point. One flight must be of at least 300 nautical miles with landings at a minimum of three points, one of which is at least 100 nautical miles from the original departure point.

61.129 AIRPLANE RATING: AERONAUTICAL EXPERIENCE (Commerical Pilot)

(b) (3) (ii) - Fifty hours of cross-country flights, each flight with a landing at a point more than 50 nautical miles from the original departure point. One flight must have landings at a minimum of three points. One flight must have landings at a minimum of three points, one of which is at least 150 nautical miles from the original departure point if the flight is conducted in Hawaii, or at least 250 nautical miles from the original departure point if it is conducted elsewhere.

Inadvertently, these amendments did not allow a person who had completed the cross-country requirements prior to the effective date (11-15-82) to use that experience in applying for the certificate. An exemption was issued on 11-23-82 to Purdue University students and anyone else affected by the rule change.

The exemption states in part, " — an exemption from FAR 61.109 (b) (2) and 61.129 (b) (3) (ii) and Part 141, Appendices A and D, is granted to each applicant for a private or commerical pilot certificate who complied with the extended cross-country flight requirement in the applicable provision as it existed on November 14, 1982, before November 15, 1982, subject to the following condition: 1. The private or commerical pilot certification flight test must be successfully completed before July 1, 1983. This exemption terminates on July 1, 1983, unless sooner superseded or rescinded. ✈

Get certificate before using auto gas

The Columbia Flight Standards District Office (FSDO) has issued the following statement concerning the use of automobile gasoline in Cessna 150 aircraft:

On August 5, 1982, the Experimental Aircraft Association was issued two supplemental type certificates which, if incorporated, allow the use of unleaded automotive gasoline, 87 minimum antiknock index, per ASTM Specification D-439.

In order to legally use automotive gasoline, owners/operators of the applicable aircraft must obtain the supplemental type certificates and alter the aircraft in accordance with that data. This requires that the alterations be performed by an appropriately rated mechanic or repair station and a maintenance record entry entered in the aircraft records. FAA Form 337 (Major Repair and Alteration) is required.

The approval applies only to certain models of Cessna 150 aircraft equipped with Teledyne Continential Motors 0-200A engines.

Only unleaded automotive **gasoline** is approved under the supplemental type certificates. **Gasohol** is **not** considered gasoline for the purpose of the supplemental type certificate.

Owners/operators should contact Cessna Aircraft Company and Teledyne Continental Motors regarding the validity of warranties when automotive gasoline is used. ✈

Eye defects said minor accident factor

Of 827,592 pilots studied by the FAA Civil Aeromedical Institute in 1979, 350,701, or 42%, required corrective lenses. Of these, 15,127 had failed color vision tests, 5,156 had monocular vision (one-eyed) and about 15,000 had other eye problems. Still, the FAA tied only one accident in 1,246 to eye defects. ✈

Time to turn dial

If you are still using 122.9 MHz for the air-to-air communications frequency, it's time to turn the dial. The frequency for inflight contact between aircraft has been 122.75 MHz since January 1978. You can still use 122.9 for broadcasting traffic pattern position at an airport without a control tower, FSS or Unicom — or for other special position reports in uncontrolled airspace, such as the VFR tunnel through a TCA. ✈

Lawyer-Pilots meeting changed

The Lawyer-pilots Bar Association semi-annual meeting has been rescheduled for Feb. 23-27 at the Hotel Coronado, San Diego, Calif.

In last month's issue, it was announced the meeting would be held Feb. 16-20. Please correct your calendar. ✈

SOUTH CAROLINA
AERONAUTICS COMMISSION
P.O. Drawer 1987
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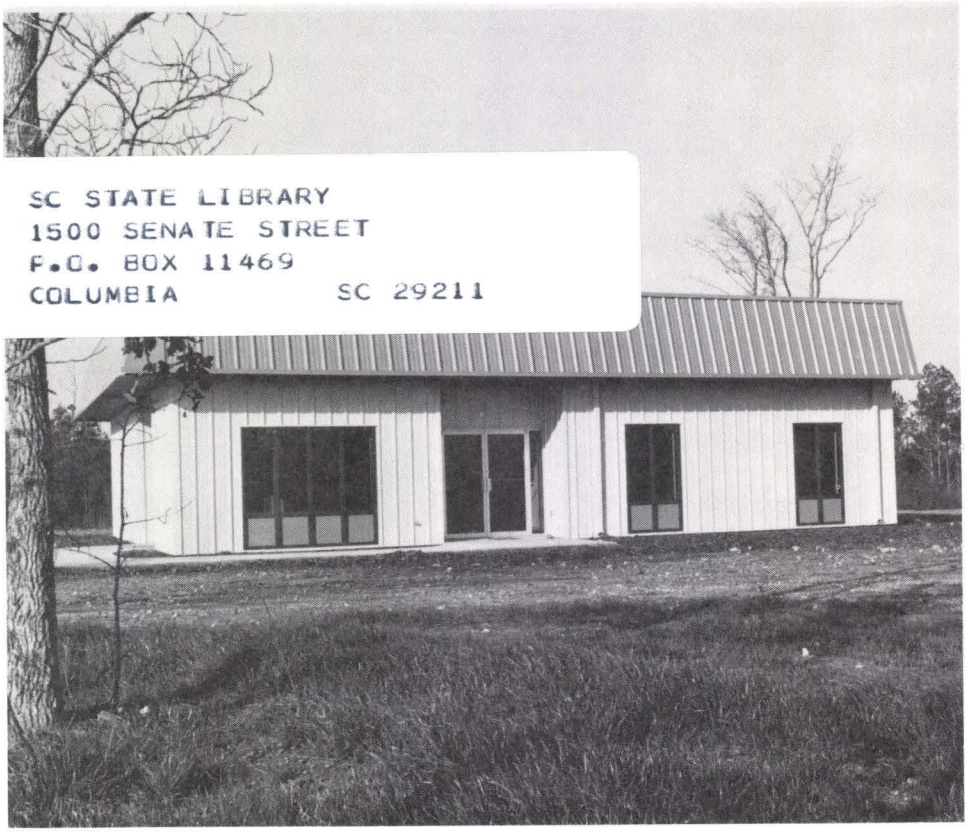
FAA establishes rotocraft office

Recognizing the growing importance of helicopters in air transportation, th Federal Aviation Administration has established a Rotorcraft Program Office to oversee the agency's activities affecting helicopters.

Named to head the new office Jerold M. Chavkin, an FAA veteran who is both an aeronautical engineer and commercial pilot. He presently is manager of the Aircraft Engineering Division in FAA's Office of Airworthiness.

The new program office will serve as the focal point for all FAA rotorcraft matters. It will report directly to FAA's Associate Administrator for Aviation Standards, Walter S. Luffsey.

Luffsey noted that helicopters comprise the fastest growing segment of aviation and said creation of the program office will provide the organizational framework within FAA that will promote safety and the continued growth of the rotorcraft industry. There presently are approximately 6,500 civil helicopters in the U.S. with the number projected to more than double by the year 2000. ✈



McCormick Airport Facility

This steel-frame, metal administration building stands nearly complete at McCormick County Airport. The 1,100 square foot building will house the McCormick County Development Board offices as well as serve as a terminal building for passengers and pilots. The $53,000 project was funded with state and local funds. Chupp Construction Co. of Honea Path was the contractor. (Aeronautics Commission Photo).

This publication is printed and distributed by the South Carolina Aeronautics Commission in the interest of aviation safety and to foster the growth of responsible aviation in the state.